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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,910	08/12/2004	Christian D. Hofstader	1589.10	3967

21901 7590 03/06/2007  
SMITH HOPEN, PA  
180 PINE AVENUE NORTH  
OLDSMAR, FL 34677

EXAMINER
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MUHEBBULLAH, SAJEDA

ART UNIT	PAPER NUMBER
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2174

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/710,910	Applicant(s) HOFSTADER ET AL.	
	Examiner Sajeda Muhebbullah	Art Unit 2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This communication is responsive to RCE/Amendment filed 12/19/2006.
2. Claims 1-24 are pending in this application. Claims 17-18 were amended.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) in view of MacKenty et al. ("MacKenty", US 6,085,161).

As per claim 1, Raman teaches a screen reader software product comprising:

a reader module communicatively coupled with resident software on a computer, the reader module adapted to collect textual and non-textual display information generated by the resident software (col.4, lines 21-38);

a broadcast module communicatively coupled to the reader module, the broadcast module adapted to communicate the display information collected by the reader module to an output device (col.4, lines 46-55); and

a schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion (col.3, lines 44-50).

However, Raman does not explicitly teach the reader module to be a screen reader module. MacKenty teaches a screen reader module which manipulates the flow of data as it is

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output to the screen allowing the user to choose portions of the document to listen to (MacKenty, col.2, lines 18-24; col.5, lines 38-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to include MacKenty's teaching with Raman's product in order to allow the user the ability to manipulate the reading of the document as a sighted individual would be able to.

As per claim 2, Raman teaches the output device to be a speech synthesizer (col.4, lines 50-55).

As per claim 3, Raman teaches the software product wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (col.15, lines 10-20; col.20, lines 66-67; col.22, lines 15-17).

As per claim 4, Raman teaches the software product wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering characteristics of the speech synthesizer, the characteristics selected from the group consisting of pitch, speed, volume, emphasis, simulated gender, simulated accent, simulated age, and pronunciation (col.18, lines 49-55; col.21, lines 20-21).

As per claim 5, Raman teaches the software product wherein the schema module includes an additional audio output layer to the broadcast of the textual display information to audibly communicate the non-textual display information in substantially concurrent fashion with the synthesized text (col.3, lines 3-7).

As per claim 6, Raman teaches the software product wherein the additional audio output layer broadcasts a pre-selected sound associated with the non-textual display information (col.15, lines 10-20, *predetermined rules decide the sound associated with non-textual information*).

As per claim 7, Raman teaches the software product wherein the pre-selected sound is end-user-definable (col.9, lines 35-46).

As per claim 8, Raman teaches the software product wherein pre-selected sound is selected from the group consisting of dynamically generated sound and prerecorded digital audio (col.9, lines 35-41).

As per claim 9, Raman teaches the software product wherein the schema module includes a plurality of additional audio outputs layer to the broadcast of the textual display information to audibly communicate a corresponding plurality of non-textual display information in substantially concurrent fashion with the synthesized text (col.3, lines 3-7; col.15, lines 18-20).

Claim 17 is similar in scope to the combination of claims 3-4 and 7, and is therefore rejected under similar rationale.

Claim 18 is similar in scope to the combination of claims 3 and 7-8, and is therefore rejected under similar rationale.

Claim 19 is similar in scope to claim 7, and is therefore rejected under similar rationale.

As per claim 20, Raman teaches the software product wherein a plurality of end-user schema definitions are assignable to specific resident software applications (col.19, lines 27-38).

As per claim 21, Raman teaches the software product wherein end-user schema definitions generated by an end user are shareable with other users (col.19, lines 27-38, *rules can be shared to other users through a file*).

As per claim 22, MacKenty teaches non-textual display information to be selected from the group consisting of hyperlink settings, data entry forms, and graphic user interface configuration (MacKenty, col.8, lines 1-25).

As per claim 23, Raman teaches the software product wherein the non-textual display information is style information (col.20, lines 7-10).

5. Claims 10-13, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) and MacKenty et al. ("MacKenty", US 6,085,161) in view of Giuliani et al. ("Giuliani", US 2002/0105496).

As per claim 10, the product of Raman and MacKenty teaches outputting of textual and non-textual display information (Raman, col.3, lines 44-50). However, the product of Raman and MacKenty does not teach the output device to be a Braille display. Giuliani teaches the output of textual and non-textual display information to be a Braille display (para.3, lines 1-4; para.18, line 4; para.21, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Giuliani's teaching with the product of Raman and MacKenty in order to allow the blind the opportunity to read and determine the attributes associated with text via different senses.

As per claim 11, Giuliani teaches the software product wherein the non-textual display information is selected from the group consisting of font format, paragraph format, bulleting, numbering, borders, shading, column format, page breaks, section breaks, tab settings, table structure, image data, case settings, comment field locations, hyperlink settings, data entry forms, and graphic user interface configuration (Giuliani, para.42, lines 6-9; para.43).

As per claim 12, Giuliani teaches the software product wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering tactile characteristics of the Braille display (Giuliani, para.42-43).

As per claim 13, Giuliani teaches the software product wherein the tactile characteristics of the Braille displayed modified by the schema module are selected from the group consisting of display speed, pin protrusion level, pin retraction level and pin vibration (Giuliani, para.42-43).

As per claim 15, the product of Raman and MacKenty teaches the software product of claim 1 wherein the output device is a speech synthesizer (Raman, col.4, lines 50-55). However, the product of Raman and MacKenty does not disclose the output device to be an array of a speech synthesizer and a Braille display, the speech synthesizer audibly broadcasts textual display information and the Braille display tactically outputs non-textual display information in substantially concurrent fashion. Giuliani teaches the output of textual and non-textual display information to be on a Braille display (Giuliani, para.3, lines 1-4; para.18, line 4; para.21, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Giuliani's teaching with the product of Raman and MacKenty in order to allow blind users the opportunity to listen to and visualize the display through touch.

As per claim 24, the product of Raman and MacKenty teaches software product of claim 23 wherein the non-textual display information is style information (Raman, col.20, lines 7-10). However, the product of Raman and MacKenty does not explicitly teach the style information to be selected from the group consisting of bold, italics, underline and font color. Giuliani teaches the output of non-textual display information to consist of bold text (para.42). It would have

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been obvious to one of ordinary skill in the art at the time of the invention to combine Giuliani's teaching with the product of Raman and MacKenty in order to enhance the user's reading experience.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) and MacKenty et al. ("MacKenty", US 6,085,161) in view of Burchart ("Burchart", US 4,836,784).

As per claim 14, the product of Raman and MacKenty teaches the software product of claim 1 to communicate textual and non-textual display information to an output device (Raman, col.4, lines 48-55). However, Raman does not teach the output device to be an array of two Braille displays, a first Braille display outputs textual display information and a second Braille display outputs non-textual display information in substantially concurrent fashion. Burchart teaches the output of both textual information and graphics on an array of Braille displays (Fig.2-6; col.5, lines 38-64; claim1). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Burchart's teaching with the product of Raman and MacKenty in order to communicate graphic displays in addition to textual information to accommodate the blind and thereby enhancing the viewing experience of the blind user (Burchart, col.1, lines 25-34, 47-52).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. ("Raman", US 5,572,625) and MacKenty et al. ("MacKenty", US 6,085,161) in view of Rohen ("Rohen", US 5,186,629).

As per claim 16, the product of Raman and MacKenty teaches outputting of textual and non-textual display information to a speech synthesizer (Raman, col.4, lines 50-55). However,



the product of Raman and MacKenty does not teach the output device to be an array of a speech synthesizer and a vibratory apparatus, the speech synthesizer audibly broadcasts textual display information and the vibratory apparatus vibrates at pre-selected frequencies responsive to non-textual display information in substantially concurrent fashion. Rohen teaches an output device which audibly and tactilely outputs textual and non-textual display information respectively (col.6, lines 23-32; col.7, lines 7-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Rohen's teaching with the product of Raman and MacKenty in order to allow blind users the opportunity to visualize the display through the use of multiple sensory functions rather than solely by means of sound.

#### *Response to Arguments*

8. Applicant's arguments filed 12/19/2006 have been fully considered but they are not persuasive.

Applicant argued the following:

a) MacKenty fails to teach a screen reader.

The Examiner disagrees for the following reasons:

Per a), MacKenty clearly teaches a screen reader as the Applicant defines it to be.

Applicant defines screen readers as "systems that output the contents of the computer screen, or a defined portion thereof, to a user, typically one who is blind or vision-impaired" (MacKenty, col.1, lines 33-35). "Additionally, they create an interface that allows a user to modify that text." (MacKenty, col.2, lines 18-30). "Additionally, it is only that which appears on the screen, or a relevant portion thereof, that is output, not the entire document or application." (MacKenty, col.5, lines 38-47; col.6, lines 58-60)

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*Communications*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajeda Muhebbullah whose telephone number is (571) 272-4065. The examiner can normally be reached on Tuesday/Thursday or alt. Mondays from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (571) 272-4063.

The fax number for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 [After Final Communication]

(571) 273-8300 [Official Communication]

(571) 273-8300 [For status inquiries, Draft Communication]

*Sajeda Muhebbullah*  
*Patent Examiner*  
*Art Unit 2174*

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